KALININ, N.; KINTSIS, T. [Kinsis, T.]

Strength test of the body of the KR-5 railroad-car model. Vestis Latv ak no.4:41-48 '62.

1. Institut avtomatiki i mekhaniki AN Latviyskoy SSR.

KINTSURASHVILI, A.T.

Phase changes in a fixated set. Eksp.issl.po psikhol.ust. 2:85-98 '63. (MIRA 16:12)

*

KINTSURASHVILI, A.T.

Natural tendency to overevaluation in the functioning of set fixated for successive relation. Eksp. issl. po psikhol. ust. 1:209-225 '58. (MIRA 13:12)

(Attitude (Psychology))
(Hallucinations and illusions)

KINTSURASHVILI, A.T.

Influence of a set in a changed critical situation. Trudy Inst. psikhol.AN Gruz.SSR 13:137-151 '62. (MIRA 16:2)
(Afterimages)

KINTSURASHVILI, M.A.

Effectiveness of spinal cord injury treatment at the TSkhaltubo Health Resort. Soob. AN Gruz. SSR 29 no. 3: 373-378 S '62 (MIRA 19:1)

1. TSkhaltubskiy filial Instituta kurortologii i fizioterapii GruzSSR. Submitted July 19, 1961.

DZHANBERIDZE, N.; KINTSURASHVILI, S.; CHKHIKVISHVILI, Ir., red.; KHOSHTARIYA, V., red. izd-va; KHUNDADZE, Z., tekhn. red.

[Soviet Georgia] Sovetskaia Gruziia. Tbilisi, Gos. izd-vo "Sabchota Sakartvelo," 1961. 1 v. (MIRA 15:1)
(Georgia--Views)

KINTSURASHVILI, Sh. S.

702. Lichnaya gigiyena rabochego podrostka. Tbilisi, Gruzmedgiz, 1954. 20s. s ill. 16sm. 3.000 ekz. 20k.—Na gruz. yaz.—[54-54841] 613.96

SO: Knizhnaya Letopis' Vol. 1, 1955

BCP

2

Purification of [beet] pulp-press water. T. Petraykowski and A. Kunisel. (Prace Głown. Inst. Przem. Rolnego i Spożywczego, 1951, 1, No. 3, 17—21. *Sug. Ind. Abstr.*, 1952, 14, 83).—In laboratory tests, 0·4 kg. of H_2SO_4 or 0·26 kg. of SO_2 per cu. m. of water at 80° gave the best results, viz., 88·4 and 86·1% pptn. of non-sugars at pH 3·3 and 3·4, respectively, but with SO_2 the ppt. was coarser, and tended to float. With milk-of-lime, 0·2% of CaO gave the best result (48·6% non-sugars pptn.), but the ppt. was formed slowly, was coarser and more bulky, and hindered decantation. After using acid, the water could be neutralised by adding diffusion water and >40% of ammoniacal water. In technical trials, using the Wintsell-Lauritzson decantation vessel, H_2SO_4 (in the above amount) gave the best results (63·2% non-sugars pptn.), yielding a mud containing 3·25% of dry solids after settling for 85 min., or 5% after 12 hr. Difficulties arose when using SO_2 or CaO.

P. S. Arup

PTA

6

1468 663.63 628.3 628.16

Kintzel A. **Irrigation Fields for Cleaning Outflowing Sugar Waters.** „Pola irygacyjne do oczyszczania cukrowniczych wód o pływowych". Gazeta Cukrownicza No. 10, 1951, pp. 216—219, 1 tab.

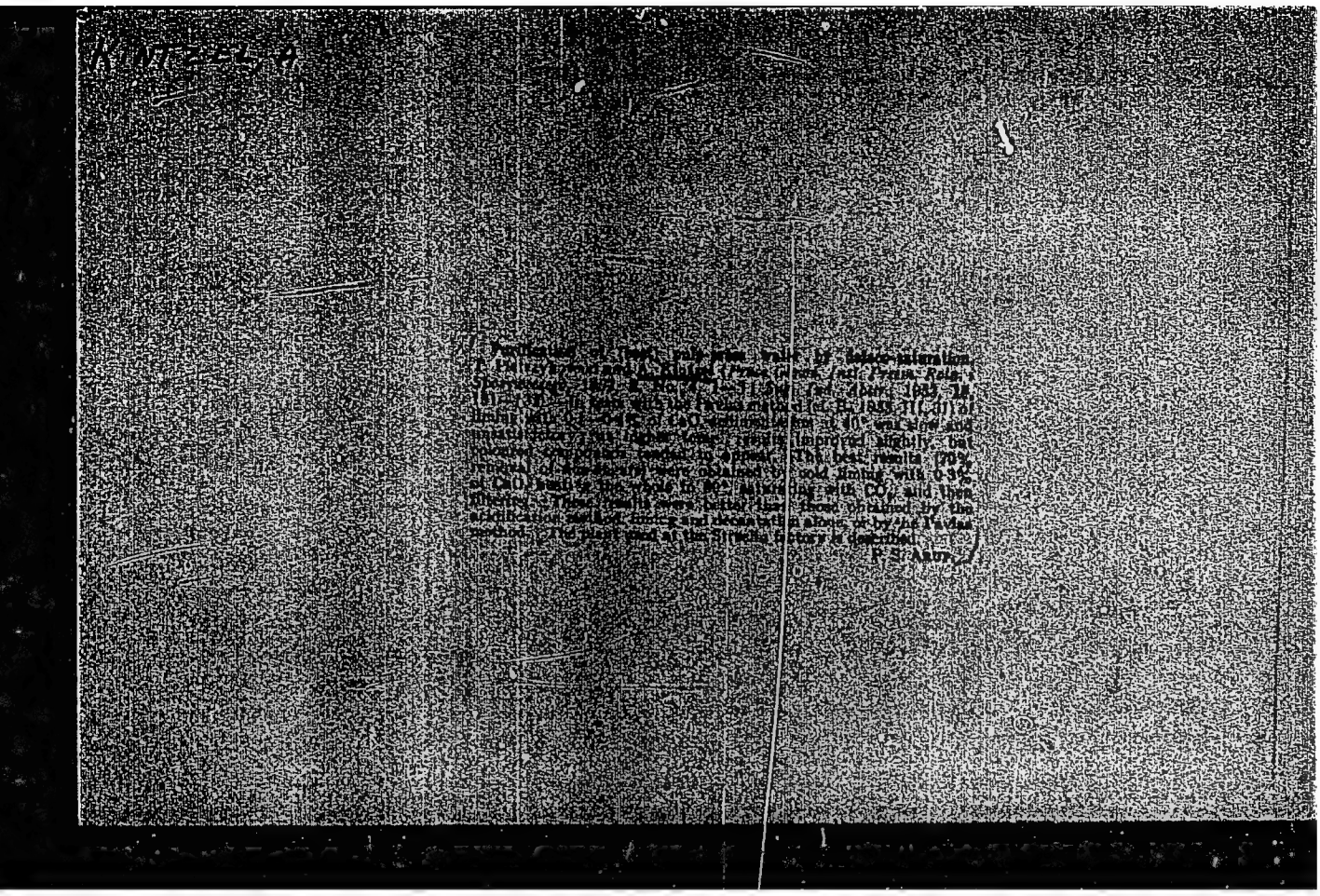
Cleaning outflowing sugar waters, mechanically infected, may be effected with good results by sedimentation basins The method of cleaning is described. It is done in the irrigation fields with simultaneous preliminary cleaning in the fermentation ponds. The irrigation fields and the care of the fields are discussed together with the control and care of the cleaning installation

KINTZEL, A. Polish CA:47:11773

with T. PIETRZYKOWSKI

"Preliminary experiments on the purification of pulp-press water."

Prace Glownego Inst. Przemysl. Rolnego Spozywczego 1, No. 3, 17-21 (1951); Sugar Ind. Abstr. 14, 83 (1952)



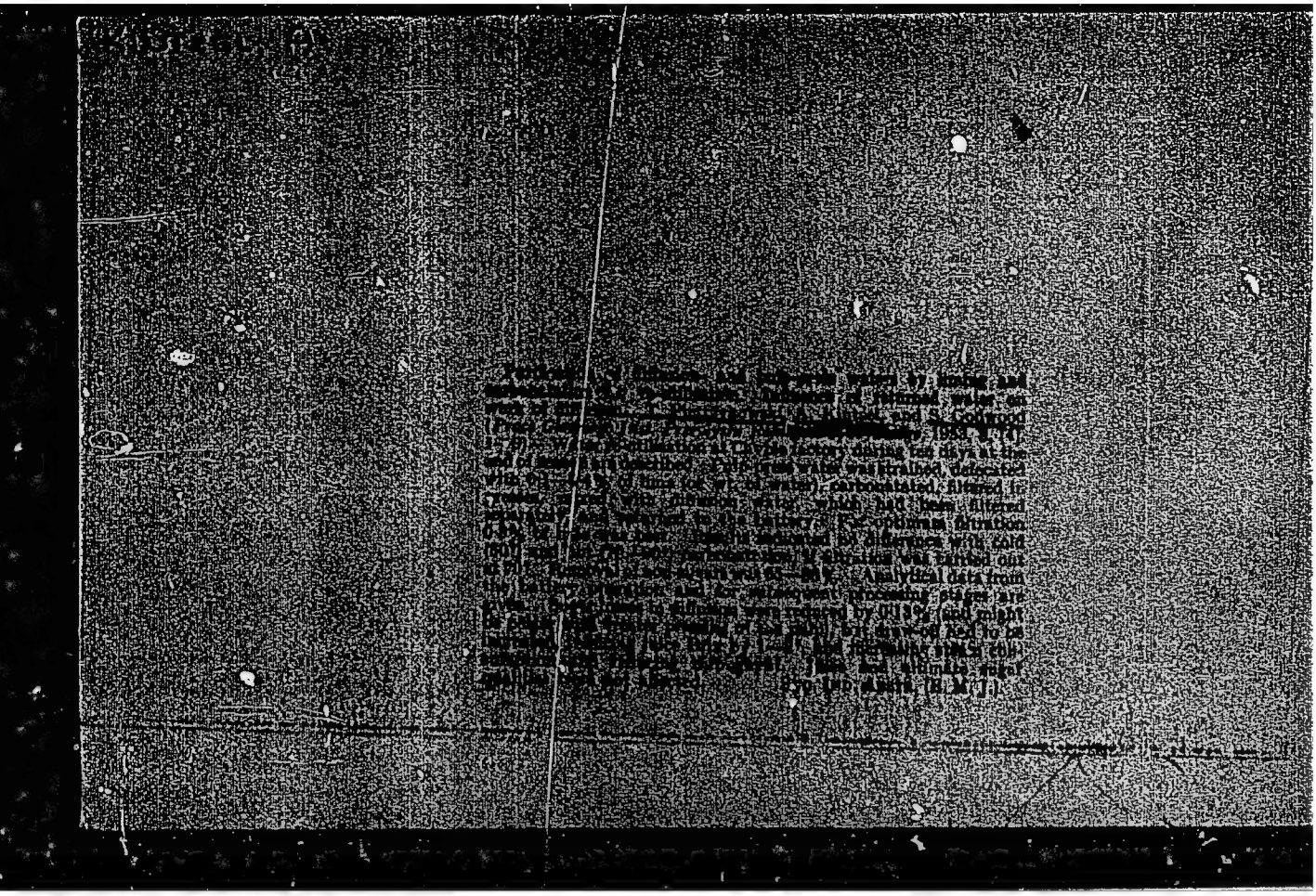
KINTZEL, ANNA

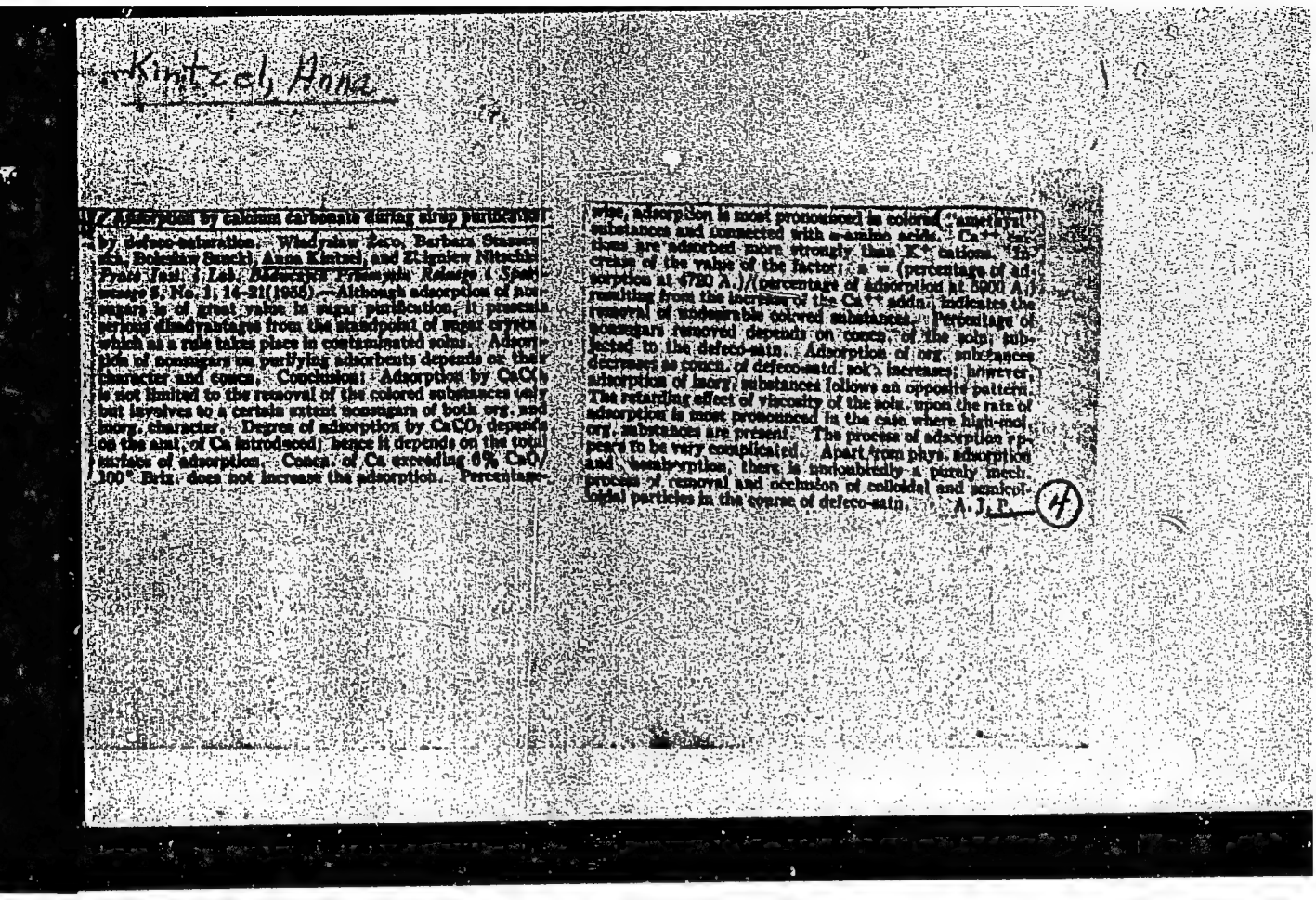
MT

Purification, for reuse, of diffusion and pulp-press water by liming and saturation. Effect of recycled water on the work of diffusion. Tadeusz Pietrzykowski, Anna Kintzel, and Stanisław Godwod. *Prace Głównego Inst. Przemysłu Rolnego i Spożywczego* 3, No. 4, 1-9(1953)(French summary).—Efficient pulp catchers are essential; lack of catchers complicates filtration. Satn. of cold-limed water from the pulp presses does not present any difficulty. Recycling of water increases the amt. of juice withdrawn by several %, and thus causes the decrease of the Brix of diffusion juice by 1 to 2%; this in turn increases the heat requirement. Recycling of water decreases sugar losses in diffusors by approx. 0.18%; it does not affect the filtration rate of the juice from the first satn.

Adam J. Pikor

(2)





Kintzel, Anna

Adsorption by calcium carbonate during sirup purification by defeco-saturation. Władysław Zaco, Barbara Staszewska, Bolesław Szuch, Anna Kintzel, and Zbigniew Nitschke *Przem. Spoż.* 7, *Lab. Rafinerii Przemysłu Rolnego* (Spożywczego) 8, No. 1, 14-21(1954).—Although adsorption of nonsugars is of great value in sugar purification, it presents serious disadvantages from the standpoint of sugar crystn., which as a rule takes place in contaminated solns. Adsorption of nonsugars on purifying adsorbents depends on their character and concn. Conclusion: Adsorption by $CaCO_3$ is not limited to the removal of the colored substances only, but involves to a certain extent nonsugars of both org. and inorg. character. Degree of adsorption by $CaCO_3$ depends on the amt. of Ca introduced; hence it depends on the total sustain of adsorption. Concn. of Ca exceeding 0% CaO/100° Brix. does not increase the adsorption. Percentage-wise, adsorption is most pronounced in colored ("amethyst") substances and connected with α-amino acids. Ca^{++} cations are adsorbed more strongly than K^+ cations. Increase of the value of the factor $\frac{a}{b}$ = (percentage of adsorption at 4780 A.)/(percentage of adsorption at 5900 A.) resulting from the increase of the Ca^{++} addn. indicates the removal of undesirable colored substances. Percentage of nonsugars removed depends on concn. of the soln. subjected to the defeco-satn. Adsorption of org. substances decreases as concn. of defeco-satd. sol'n. increases; however, adsorption of inorg. substances follows an opposite pattern. The retarding effect of viscosity of the sols. upon the rate of adsorption is most pronounced in the case where high-mol. org. substances are present. The process of adsorption appears to be very complicated. Apart from phys. adsorption and chemisorption, there is undoubtedly a purely mech. process of removal and occlusion of colloidal and semicolloidal particles in the course of defeco-satn. A. J. P.

KINTZEL, A.

Use of active precipitation for the purification of sewage from yeast and starch plants. Acta Microb.polon. 8:145-150 1959.

1. Z Zakladu Utylizacji Wod Sciekowych Instytutu Przemyslu Fermentacyjnego w Warszawie.
(SEWAGE)

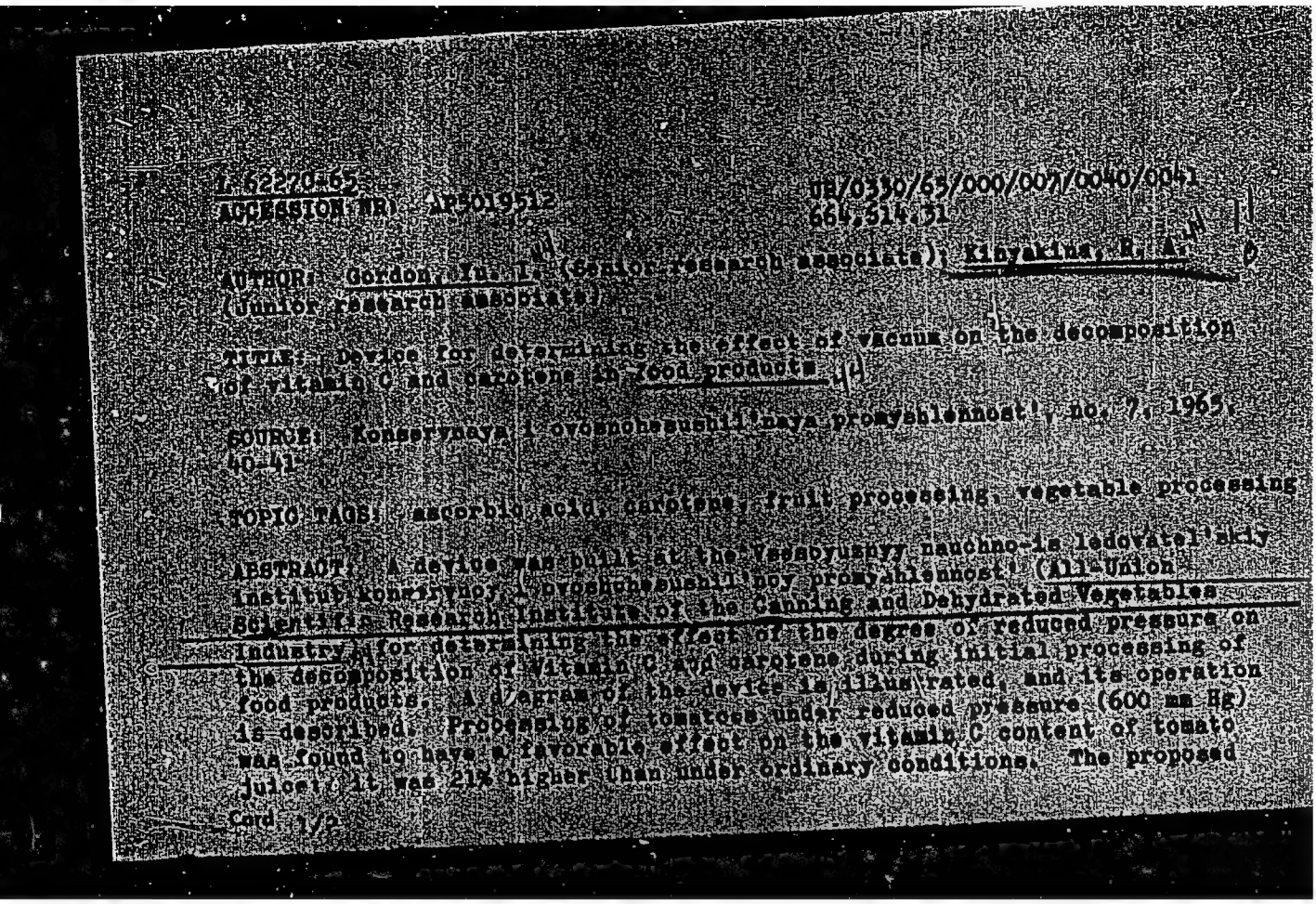
KINTZEL, Tadeusz; WISNIEWSKI, Tadeusz

Standardization of plastics. Przem chem 41 no.8:446-44.
Ag '62.

1. Polski Komitet Normalizacyjny i Instytut Tworzyw Sztucznych, Warszawa.

KINUS, B., inzh.; PREDKOVA, O., inzh.

Machine computation of the utilization of building equipment. Na stroi. Ros. no.8:36-37 Ag '61. (MIRA 14:9)
(Building machinery) (Construction industry--Accounting)



L 62270-65
ACCESSION NR: AP5019512 UR/0330/65/000/007/0040/0041
664.514.31

AUTHOR: Gordon, Yu. I. (Senior research associate); Kinyakina, R. A. (Junior research associate)

TITLE: Device for determining the effect of vacuum on the decomposition of vitamin C and carotene in food products

SOURCE: Konservnaya i ovoshchesushil'naya promyshlennost', no. 7, 1965, 40-41

TOPIC TAGS: ascorbic acid, carotene, fruit processing, vegetable processing

ABSTRACT: A device was built at the Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy, ovoshchesushil'noy promyshlennosti (All-Union Scientific Research Institute of the Canning and Dehydrated Vegetables Industry) for determining the effect of the degree of reduced pressure on the decomposition of vitamin C and carotene during initial processing of food products. A diagram of the device is illustrated, and its operation is described. Processing of tomatoes under reduced pressure (600 mm Hg) was found to have a favorable effect on the vitamin C content of tomato juice; it was 21% higher than under ordinary conditions. The proposed

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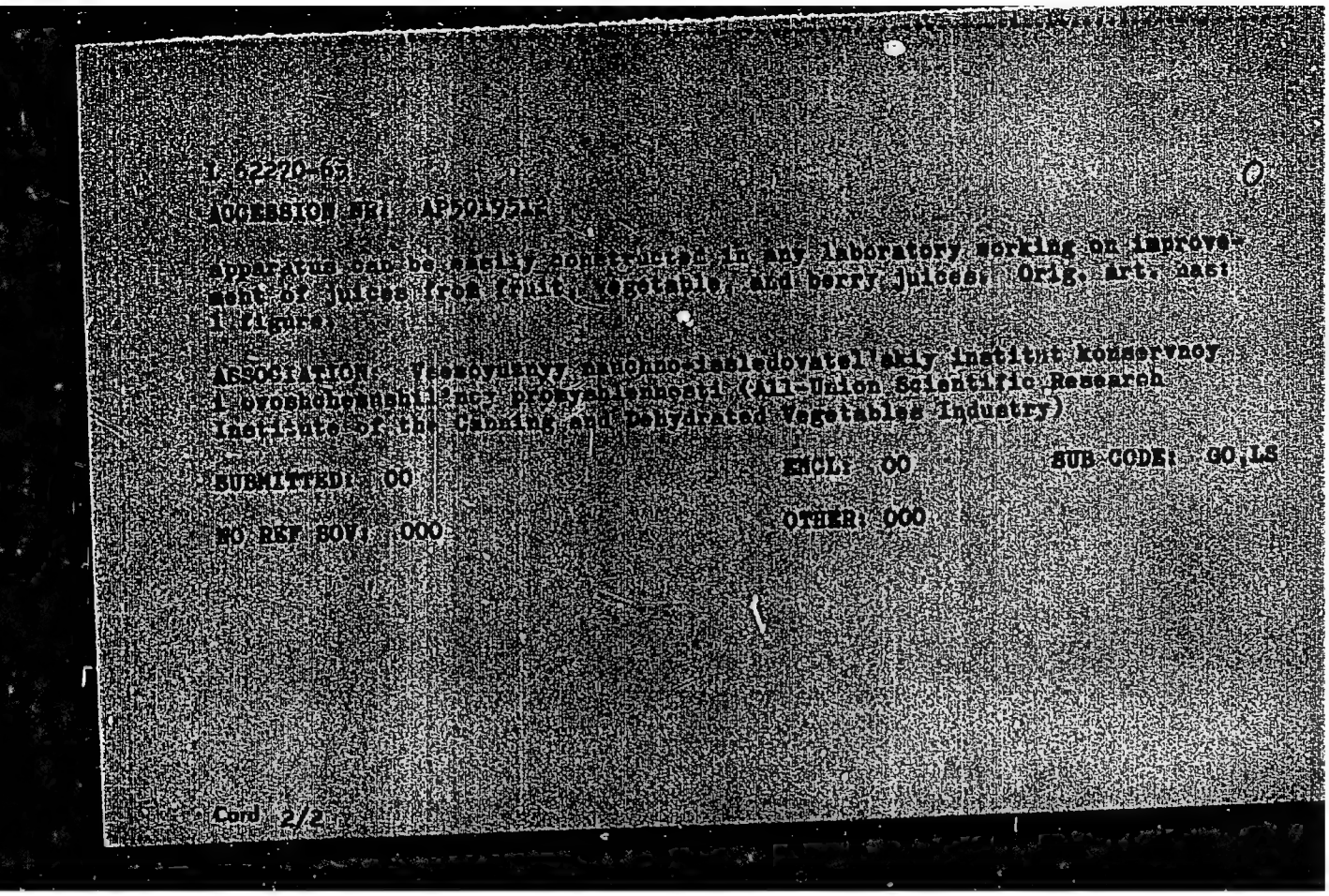

L 62220-65

ACCESSION NR: AP5019512

apparatus can be easily constructed in any laboratory working on improvement of juices from fruit, vegetable, and berry juices. Orig. art. has: 1 figure.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'noy promyshlennosti (All-Union Scientific Research Institute of the Canning and Dehydrated Vegetables Industry)

SUBMITTED: 00 ENCL: 00 SUB CODE: GO,LS

NO REF SOV: 000 OTHER: 000

Card 2/2

06518 SOV/141-58-1-8/14

AUTHOR: Kinyapin, S. D.

TITLE: A Very Simple Switching System for Controlling an Unstable Object

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1958, Nr 1, pp 88-95 (USSR)

ABSTRACT: The switching control of an unstable object with one degree of freedom can be investigated by the following differential equation:

$$a\ddot{z} + b\dot{z} - cz = \mp f(z + k'z) \quad , \qquad (1)$$

which, in normalized coordinates $x = cz$ and $\tau = \sqrt{\frac{c}{a}}\, t$ can be written as Eqs (2') or (2") where $f(u) = 1$ for $u > \sigma$ and for $-\sigma < u < \sigma$ if $u > \sigma$ during the preceding cycle; $f(u) = -1$ when $u < -\sigma$ and $-\sigma < u < \sigma$, if $u < -\sigma$ during the previous cycle. Eqs (2') and (2") can be investigated by the method of point transformations. The phase space of the system consists of two semi-planes

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A Very Simple Switching System for Controlling an Unstable Object

$x + ky > -\sigma(\pi_1)$ and $x + ky < \sigma(\pi_2)$ which partly overlap (see Fig 1). In the plane π_1 Eqs (2') yield Eqs (3') while on π_2 Eqs (3") are obtained. The analysis of Eqs (3') consists of the investigation of the point transformation of the segment $x + ky = \sigma(L_o)$ into a straight line $x + ky = -\sigma(L_1)$. If the transformation point originates from a point $M_o(x_o, y_o)$ of the straight line L_o and, after a certain time, reaches a point $M_1(\bar{x}_1, \bar{y}_1)$ of the straight line L_1 , integration of Eqs (3') yields Eq (4). If x_o and $\bar{x}_1$ are eliminated from Eq (4) and $(-\bar{y}_1)$ is substituted by y_1 , a transformation of the straight line L_o into itself is obtained. This is described by Eq (7). Eq (7) can be investigated graphically. For this purpose two functions z_1 and z_o (see Eqs (18)) are introduced and the graphs are constructed in such a manner that y_o and y_1 are represented by the abscissae and z_o and z_1 are given by the

A Very Simple Switching System for Controlling an Unstable Object

ordinates. When $\sigma < 1$, two cases are possible; these are illustrated in Figs 3. For $\sigma \geq 1$ the graphs are given in Fig 4. The pull-in region for a stable element is bounded by two separatrices Γ_1 and Γ_2 and the phase trajectories passing through the points a_2 and $-a_2$ on the straight lines L_0 and L_1, respectively. These regions are shown in Fig 5 for various k and σ. The analysis of the space of the parameters δ, σ and k of Eqs (2') is shown in Fig 6. The case when $k = \delta = \sigma = 0$ is represented by the phase picture in Fig 7. Eq (2") can be investigated in the same way as Eq (2'). The phase space for this case is illustrated by Fig 8. From the investigations it is concluded that the system represented by Eq (2') can operate in the regime of stable oscillations or, in the absence of spatial delays, it can have a stable equilibrium state. The presence of the delays affects the control adversely, which is due to the fact that while the delay is

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increased, the pull-in region of the stable limit cycle is reduced. The paper contains 9 figures and 4 references, 1 of which is English and 3 are Soviet.

ASSOCIATION: Issledovatel'skiy fiziko-tekhnicheskiy institut pri Gor'kovskom universitete (Physics Engineering Research Institute of Gor'kiy University)

SUBMITTED: June 27, 1957.

86001

S/141/60/003/003/019/021/XX
E192/E382

16.3400 16.9500 (1024,1138,1144)

AUTHOR: Kinyapin, S.D.

TITLE: Stability of the Equilibrium State of a Two-stage Switching System 25

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1960, Vol. 3, No. 3, pp. 511 - 525

TEXT: The system is illustrated in Fig. 1. Here, $K_1(p)$ and $K_2(p)$ (defined by the first two equations on p. 511) are the transfer functions of the linear portions of the system. The system can be described (Refs. 1, 2) by the following differential equations with canonic variables:

$$\left.\begin{aligned} &\dot{x}_{i1} + \lambda_{i1}x_{i1} = c_{i1}\,\mathrm{sgn}\, y_2 \quad (i = 1, 2, \ldots, n_1); \\ &\dot{x}_{i2} + \lambda_{i2}x_{i2} = c_{i2}\,\mathrm{sgn}\, y_1 \quad (i = 1, 2, \ldots, n_2); \end{aligned}\right\} \qquad (1)$$

$$y_1 = \sum_{i=1}^{n_1} x_{i1}; \quad y_2 = \sum_{i-1}^{n_2} x_{i2} \; .$$

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E192/E382

Stability of the Equilibrium State of a Two-stage Switching System

By differentiating y_1 and y_2 with respect to t and substituting x_{ij} $(j = 1, 2)$ from Eqs. (1), it is possible to obtain the following expressions for $\dot{y}_1$ and $\dot{y}_2$:

$$\left.\begin{aligned} \dot{y}_1 &= -\sum_{i=1}^{n_1} \lambda_{i1} x_{i1} + \operatorname{sgn} y_2 \sum_{i=1}^{n_1} c_{i1} \\ \dot{y}_2 &= -\sum_{i=1}^{n_2} \lambda_{i2} x_{i2} + \operatorname{sgn} y_1 \sum_{i=1}^{n_2} c_{i2} \end{aligned}\right\} \quad (2)$$

In the vicinity of the equilibrium state $x_{ij} = 0$, the sign of $\dot{y}_j$ is determined either by the sign of y_j or by the sign of $-\sum_{i=1}^{n_j} x_{ij}\lambda_{ij}$. The $(n_1 + n_2)$-dimensional phase spaces

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Stability of the Equilibrium State of a Two-stage Switching System

of the system described by Eqs. (1) are given in Fig. 2 for three different cases: $n_1 - m_1 = 1$, $n_2 - m_2 = 1$; $n_1 - m_1 = 2$, $n_2 - m_2 = 1$ and $n_1 = m_1 = 2$, $n_2 - m_2 = 2$. The mapping point in the semiplane $y_1 = 0$, $y_2 < 0$ can have three types of motion: 1) the mapping point reaches a point lying in the same semiplane without intersecting the plane $y_2 = 0$ (this is point transformation V); 2) the mapping point reaches a point lying on the semiplane $y_2 = 0$, $y_1 > 0$ (this is point transformation T); 3) the mapping point goes to infinity without intersecting the semiplane $y_1 = 0$, $y_2 < 0$ or the semiplane $y_2 = 0$, $y_1 > 0$. The point transformation of the type V can exist only in the case when $n_1 - m_1$ and $n_2 - m_2$ are not simultaneously equal to unity. This transformation is

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S/141/60/003/003/019/021/XX
E192/E382

Stability of the Equilibrium State of a Two-stage Switching System

described by Eqs. (3). The transformation T_1 of the points of the plane $y_1 = 0$ into the points of the plane $y_2 = 0$ is described by Eqs. (8). Analogously, the transformation T_2 of the points of the plane $y_2 = 0$ into points in the plane $y_1 = 0$ is expressed by Eqs. (9), where τ_2 is the smallest positive root of Eq. (10). W is the point transformation T_1T_2 and this is described by Eqs. (11), where τ_1 and τ_2 are the smallest positive roots of Eqs. (12) and (13). Now the asymptotic stability of the equilibrium state of a two-stage switching system requires that the following conditions be met (Refs. 5, 6):

1) the existence conditions for the point transformation W ;
2) the stability conditions for the fixed point $x_{ij} = 0$ of the point transformation W .

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E192/E382

Stability of the Equilibrium State of a Two-stage Switching System

($n_1 - m_1 = 2$ and $n_2 - m_2 = 1$) the moving point of the point transformation W is unstable and consequently the equilibrium state of the system is also unstable. For the third case ($n_1 - m_1 = 2$, $n_2 - m_2 = 1$) the equilibrium state is stable if the difference between the numerator and denominator of the combined transfer function $K(p) = K_1(p)K_2(p)$ is equal to 2, all the roots of the numerator of $K(p)$ lie in the lefthand-side semiplane and if $a_o < 0$ and $a_1 - a_0 b_1 > 0$; in all the remaining cases the equilibrium state is unstable.
There are 2 figures and 7 Soviet references.

Card 6/7

89001
S/141/60/003/003/019/021/XX
E192/E382

Stability of the Equilibrium State of a Two-stage Switching System

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-tekhnicheskiy institut pri Gor'kovskom universitete
(Scientific Research Physics and Technology Institute of Gor'kiy University)

SUBMITTED: December 22, 1959

Card 7/7

85989

S/141/60/003/004/014/019
E032/E514

24.4100

AUTHORS: Neymark, Yu. I. and Kinyapin, S. D.

TITLE: On the State of Equilibrium on a Surface of Discontinuity

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1960, Vol.3, No.4, pp.694-705

TEXT: A large number of papers have been published on the stability of the state of equilibrium of a relay system (Refs.1-17). The method of studying the stability of the equilibrium state of a relay system which was put forward by the present authors in Ref.13 was later applied by Kinyapin (Ref.17) to a two-stage relay system, and by Ayzerman and Gantmakher (Ref.20) to the general problem. The latter paper was read at the First All Union Conference on Theoretical and Applied Mechanics. The present paper is concerned with the general problem of stability of the state of equilibrium on a surface of discontinuity. The treatment is based on the method of point representations, and the theorem given by the first of the present authors in Refs. 18 and 21, which is concerned with the relation between the stability of a fixed point of a point representation in the critical case when all the roots of the characteristic equations are equal to unity, and the stability of the equilibrium

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On the State of Equilibrium on a Surface of Discontinuity

where a_i^+, a_i^-, a_{ij}^+, a_{ij}^- are constants and the terms ω_i^+ and ω_i^- are not less than of the second order of small quantities in x_1, $x_2, \ldots x_n$. The phase space of the system given by Eq.(1) is divided into two parts G^+ and G^- by the surface $x_n = 0$. In each of these the motion of a phase point is governed by one of the equations in Eq.(1). On the surface S itself, the motion of the phase point is not defined by Eq.(1). In order to define its motion on this surface, the following four cases must be considered:

$$1)\ \dot{x}_n^+ = f_n^+ > 0; \quad \dot{x}_n^- = f_n^- > 0;$$

$$2)\ \dot{x}_n^+ = f_n^+ < 0; \quad \dot{x}_n^- = f_n^- < 0; \qquad (3)$$

$$3)\ \dot{x}_n^+ = f_n^+ < 0; \quad \dot{x}_n^- = f_n^- > 0;$$

$$4)\ \dot{x}_n^+ = f_n^+ > 0; \quad \dot{x}_n^- = f_n^- < 0.$$

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85989

S/141/60/003/004/014/019
E032/E514

On the State of Equilibrium on a Surface of Discontinuity

In the first and second cases a phase trajectory passes through a point M on the surface of discontinuity, from the half-space G^- to G^+ and, correspondingly, from G^+ to G^-. In the third case the phase point remains on the surface $x_n = 0$ until the third condition is no longer satisfied. Finally, in the fourth case the motion of the phase point M is undefined. In the case of the corresponding physical system, this means that the phase point M will be displaced into the half-space G^+ or G^-, depending on random effects. The regions π^+, π^-, C and D on the surface $x_n = 0$ (cf.Fig.1), which correspond to the four cases enumerated in Eq.(3), are separated from each other by the curves γ^+ and γ^- on which $f_n^+ = 0$ or $f_n^- = 0$, respectively. The possible behaviour of the phase trajectories near the bounding curves γ^+ and γ^- is shown in Figs. 2a and 2b. The present authors derive an analytical criterion for distinguishing between these cases and the general aim is to study the behaviour of the phase trajectories in the neighbourhood of the intersection of the γ^+ and γ^- curves and, in particular, to determine the conditions under which all the phase

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On the State of Equilibrium on a Surface of Discontinuity

curves in the neighbourhood of a point M, which are common to γ^+ and γ^-, asymptotically approach this point for $t \to \infty$. The point M is defined as the stable state of equilibrium. The analysis is continued using a set of coordinates having the origin at an arbitrary point corresponding to the intersection of the γ^+ and γ^- curves. The coefficients a_n^+ and a_n^- then vanish and, in order that the origin $M^*(0,0,\ldots 0)^n$ should be a stable state of equilibrium, it is necessary that the first of the two cases shown in Fig.2 should occur in the neighbourhood of M^*. When this necessary condition is satisfied, then the phase trajectories in the neighbourhood of M^* define the point representation T^+ and T^- on the S surface. The results of the paper are summarized in two basic theorems which give the stability conditions for the point $M^*(0,0,\ldots,0)$, depending on the values of the parameter d which is defined by

$$d = ab,$$

where

$$a = 2\sum_{j=1}^{n} a_{nj}^- a_j^+ \left(\sum_{j=1}^{n} a_{nj}^+ a_j^+\right)^{-1}$$

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85989

S/141/60/003/004/014/019
E032/E514

On the State of Equilibrium on a Surface of Discontinuity

$$b = 2\sum_{j=1}^{n} a_{nj}^+ a_j^- \left(\sum_{j=1}^{n} a_{nj}^- a_j^-\right)^{-1}.$$

There are 5 figures and 22 Soviet references.

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-tekhnicheskiy institut pri Gor'kovskom universitete
(Scientific Research Physico-Technical Institute of the Gor'kiy University)

SUBMITTED: April 5, 1960

Card 6/6

2.3410 2406
16.8000 (1031, 1121, 2505)

S/141/61/004/001/013/022
E140/E485

AUTHOR: Kinyapin, S.D.

TITLE: On a relay control system with unstable object

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1961, Vol.4, No.1, pp.136-150

TEXT: As far as the author is aware, this is the first study of a third-order relay control system with unstable object. The method adopted for the study is that of point transformation of portions of the plane of switching (in the phase space) into themselves. In Section 1, the author examines the phase space and the method of reducing the problem to a point transformation. To this end he first determines the regions of the phase space in which qualitatively identical behaviour of the phase trajectories is obtained. The phase space is then found to consist of two distinct regions, trajectories which pass to infinity after intersecting the switching plane and those which return to the switching plane, permitting a point transformation of the latter into itself T. (Abstractor's note: The author employs the symbol T for a parameter of the system as well as for the point transformation found.) In Section 2, the properties of the point

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25953 S/141/61/004/001/013/022
On a relay control system ... E140/E485

transformation T are examined. Applying T an infinite number of times, the points of the region of definition of the transformation either emerge from the region or tend to an equilibrium state or to an invariant curve. Then the transformation reduces practically to the transformation of invariant curves into themselves, which implies the impossibility of multiply periodic motion in the system under study. A condition is found on the parameters of the system for which stationary points of the point transformation are stable. In Section 3, a condition for the stability of equilibrium states is found.
In Sections 4 and 5, two surfaces of bifurcation, which divide the phase space into regions with qualitatively identical patterns, to within multiply periodic regimes, are considered. The formation of limit cycles from equilibrium states and the merging of limit cycles with the integral surface is followed. To stable equilibrium states correspond stable limit cycles and to unstable equilibrium states, unstable. There are 7 figures and 16 Soviet references.

Card 2/3

25953 S/141/61/004/001/013/022
On a relay control system ... E140/E485

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-tekhnicheskiy institut pri Gor'kovskom universitete (Scientific-Research Institute for Physics and Engineering at Gor'kiy University)

SUBMITTED: July 9, 1960

Card 3/3

2410 2406 25954

16.8000 (1031, 1121, 1132)

S/141/61/004/001/014/022
E140/E485

AUTHOR: Kinyapin, S.D.

TITLE: The dependence of the dynamics of a certain relay control system with unstable object on the parameters of the system

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1961, Vol.4, No.1, pp.151-164

TEXT: This is a direct continuation of the work published in the preceding article of the same issue (pp.136-150). The author considers in particular the behaviour of the system for the stationary points of the point transformation T at infinity in the phase space. It is found that the qualitatively different behaviour patterns are few in number. There are only four regions for the phase space of the third-order relay control system in question. In the first, all trajectories pass to infinity; in the second, some pass to infinity, some tend to a single stable limit cycle; in the third, some pass to infinity and some to a stable equilibrium under switching conditions; the fourth differs from the third in the presence of an unstable limit cycle. A long appendix gives a proof for the uniqueness of periodic

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solutions. The work was done under the direction of Professor Yu.I.Neymark; N.M.Stankevich carried out certain numerical calculations on the digital computer ГИФТИ (GIFTI). There are 8 figures and 3 Soviet references.

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-tekhnicheskiy institut pri Gor'kovskom universitete (Scientific-Research Institute for Physics and Engineering at Gor'kiy University)

SUBMITTED: July 9, 1960

S/141/62/005/006/018/023
E140/E435

AUTHORS: Neymark, Yu.I., Kinyapin, S.D.

TITLE: On the establishment of periodic motion arising from an equilibrium state on a discontinuity surface

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika. v.5, no.6, 1962, 1196-1205

TEXT: The phase plane method is used to investigate the establishment of periodic motion due to change of parameters from an equilibrium state in a system described by n first order differential equations. The method is applied to a relay system and the phase trajectories of such a system in the neighborhood of the equilibrium point during the establishment of the periodic motion are determined. There are 2 figures.

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-tekhnicheskiy institut pri Gor'kovskom universitete (Physicotechnical Scientific Research Institute at Gorkiy University)

SUBMITTED: May 16, 1962

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KINYAPINA I. D., Cand. Medic. Sci. (diss) "Use of Polyurethan Plastic as Interpositional Material for Arthroplasty By Reason of Ankylosis of Maxillary Articulation," Gor'kiy, 1961, 17 pp. (Gor'kiy Med. Inst.) 300 copies (KL Supp 12-61, 285).

KINYAPINA, S.N.

F

USSR/Human and Animal Pathogens

Abs Jour : Ref Zhur Biol., No 1, 1959, 300

Author : Lukin, Yu.B., Yevseev, M.V., Kinyapina, S.N., Amirkhanova, M.G.

Inst : Ufimsk Institute of Vaccines and Sera

Title : Comparative Evaluation of Several Methods for Removing Pyrogen from Sera Purified by the "Diaferm-3 IEM AMN" Method

Orig Pub : Tr. Ufimsk n.-i. in-ta vaktsii i syvorotok

Abstract : No abstract.

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